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Principal`s leadership on students` outcomes

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Abstract

This study aims to explore, in a sample of Portuguese schools, if there is an impact of school leadership, particularly of the principal, on students` outcomes. The study adopts mixed-methods, combining the analysis of national examination, questionnaire surveys (from LOLSO, Leithwood, Mulford & Silins, 2004), structured open-ended interviews and focus groups to the principals of 6 school groupings, heads of department, teachers and students. This study reports results from the interviews analyses of the principals, and the focus group of the head of departments and students. By means of content analysis, we make inferences from data to the context, providing knowledge and new insights on the object of the study. A preliminary analysis of data identifies some contradictions between what principals claim to do and the perceptions of heads of department and students in categories like Building a shared vision through the school project and communicating that vision; High performance expectations to students and teachers and Providing individual support (mainly in schools over 1000 students). In the interviews and in the questionnaires principals, head of departments and students say that the students` outcomes promote changes in school organization and in the leadership practices of the principal.

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Keywords: School leadership; Principal; Student; Outcomes; Portugal.

1. School leadership

School leadership legislation has changed in Portugal in 2008 with the approval of the Decree-Law 75/2008. The responsibility of leadership in Portuguese schools changed from a management team to a single element, the principal, elected by a general council, consisting of teachers, staff, parents and representatives of the local authority

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and institutions from the community. This change has increased principals´ responsibility making this role somehow more complex. Consequently, 6 years after this law was adopted, most of the Portuguese schools and their principals are still adapting to this challenge.

Internationally, there is the apprehension that school leadership is an extremely important variable that can make all the difference in schools. Several studies (Hallinger & Heck, 1996; Leithwood, Mulford & Silins, 2004; Robinson et al., 2008; Day, Sammons, Leithwood, Hopkins, et al, 2011) have shown that there is a positive, though indirect, effect of school leaders, including principals, on the students' outcomes. These studies also conclude that this influence is mostly indirect, achieved through actions that the principals take concerning school conditions, classrooms conditions and teachers, which in turn will indirectly influence students´ learning.

The framework for our study is the model presented by Leithwood, Louis, Wahlstrom and Anderson (2010) (see figure 1) in which school leadership directly influences school, classroom conditions and teachers, that in turn influences students´ learning indirectly.

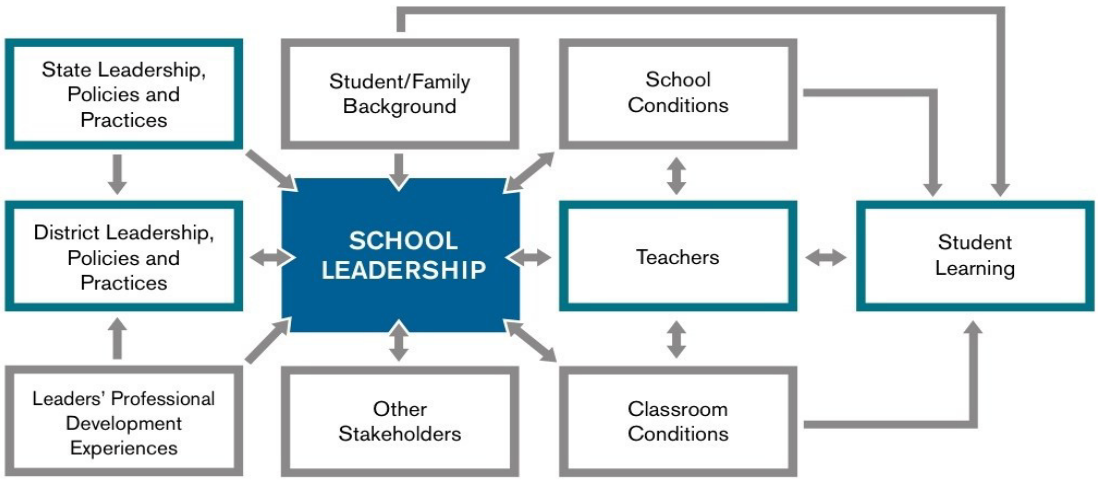

Figure 1. Leadership influences on student learning

Thus the aim of our study is to verify the existence of a relationship between the principal´s leadership on students' outcomes in Portuguese schools.

2. Methods

The sample of our study consists of six school groupings , in the southern region of Portugal, Algarve. The A-D school groupings are basic education schools, and the first two have less than one thousand students. School groupings E and F have secondary education and both have more than one thousand students. Low-income students (LIS) vary between 37,4% to 56,5% in the school groupings. In table 1 we present our population, by school grouping.

Table 1. Sample size surveyed (concerning 9th grade and secondary)

School	Level	Students	Teachers	% LIS
A	Primary and middle	24	14	44,8 %
B	Primary and middle	45	18	51,4 %
C	Primary and middle	137	42	41,7 %

D	Primary and middle	95	42	56,5 %
E	Primary, middle and Secondary	550	100	42,5 %
F	Primary, middle and Secondary	448	96	37,4 %

This study uses mixed methods, combining quantitative methods with qualitative methods in order to provide a more comprising understanding of leadership models that positively affect students´ outcomes over time. Quantitative data have been collected through the analysis of national examinations on middle and secondary school performance over the last four years and through the application of questionnaires, adapted from LOSLO project (Leithwood, Mulford, Silins, 2004), to students and teachers. The students' questionnaire was based on 5 dimensions: Home Background, Teachers` work, Participation, academic self-concept and Engagement. The teachers' questionnaire was based on 6 dimensions: Principal transformational leadership, Distributed leadership, Organisational learning, Staff valued, School autonomy and Community focus. The questionnaires were applied to students from the 9th, 11th and 12th grades, and to the teachers that constitute the sample of our study. The questionnaire was made available online with the Survey Monkey software. In table 2 we present the percentage of returned surveys, by school grouping.

Table 2. Percentage of returned surveys

School	Students	% Surveys	Teachers	% Surveys
A	*23*	96%	9	64%
B	23	51%	10	56%
C	112	82%	27	64%
D	76	80%	34	81%
E	139	25%	20	20%
F	191	43%	30	31%

Qualitative data were collected by means of individual interviews to the principals and focus group interviews to the heads of department, teachers and students. The interviews were semi-structured and based on 4 dimensions (Day, Sammons, Leithwood, Hopkins, Gu, Brown and Ahtaridou (2011): Setting directions, Refining and aligning the organization, Developing people and Improving the teaching and learning programme. The sample comprises 6 principals 35 heads of department 29 teachers and 39 students from six school grouping.

To analyze the questionnaires survey data we have used descriptive analyses and t test for independent samples (in order to explore the differences between teachers, students and schools) with the program SPSS Statistics. The answers of the heads of department and teachers were compared as well as the answers of students from different grades and different types of courses. Other variables were used for comparisons included school sector, school dimension and global students' income level. The qualitative data collected was coded and analyzed in NVivo9.

3. Data

The analysis of students' classifications in national examinations over the last four years reveals that the school groupings classifications from our sample vary widely in national assessments and actually most schools often get a

* A school grouping is an organizational unit made up of a group of schools from the same territorial area that offers different levels of education. These organizational units have been created so that students can proceed their studies within the same school grouping, in order to provide them a sequential and articulated education overcoming schools' isolation and strengthening their educational capacity. (Decree-Law 75/2008, article 6).

negative average. The results oscillate from year to year. However as it can be observed in table 3, school groupings B, C and F present outcomes that point out to a steady improvement of the results in the 9th grade examinations over the years.

Table 3. National Examination 2011-2014 (9th grade students)

	2011	2012	2013	2014
National Mean	2,59	2,84	2,52	2,78
School A	*2,23*	2,80	2,52	2,87
School B	2,48	2,60	2,60	2,97
School C	2,69	2,75	2,76	2,88
School D	2,12	2,47	2,15	2,49
School E	2,50	3,07	2,68	2,88
School F	2,47	2,61	2,61	2,75

In table 4 we can see the evolution of the results concerning national examinations in the two school groupings with secondary level. We can verify an oscillation of the results over the last four years.

Table 4. National Examination 2011-2014 (secondary examination)

	2011	2012	2013	2014
National Mean	9,68	8,75	8,25	9,50
School E	9,93	10,23	8,79	9,40
School F	9,05	9,63	8,69	9,44

3.1. Students 'questionnaire

In table 5 we present the results of the students` survey. We highlight the dimension average and the values of some items, lower and higher for dimension. When there are differences between groups, they are also shown in the table, as we can see in the dimensions Home Background and Teachers´ Work.

Table 5. Results of Students' questionnaire. Average per dimension / Item

Home Background **Mean – 3,75**	**Teachers` Work** **Mean – 3,42**	**Participation** **Mean – 3,26**	**Academic Self-Concept** **Mean – 3,76**	**Engagement** **Mean – 3,39**
Workspace at home – **4,15**	Teachers expect me to do my best– **3,97**	Involved in classwork – **3,62**	I will graduate from high school – **4,37**	Student-Teacher relationship – **3,30**
My parents encourage me to participate in extracurricular activities – **3,54**	Teachers frequently discuss my work with me – **2,96**	Own goalsetting – **3,31**	I am satisfied with my marks – **3,31**	Peers – **3,82**
		Extracurricular activities – **2,87**		Utility – **3,76**

Differences between E school (secondary level) and the other schools (0 .003)	**Differences between schools with and without secondary level (0 .004)**	**Absenteeism – 1,42** Late school – **1,87** Skipped class – **1,31** Absent whole day – **1,10**	Identification with school – **3,13**

The results show that although there is a large percentage of a low income student, they have study conditions at home. We can find differences between E school, with secondary level and the others concerning home background. If we consider the parents ´qualifications we find that most of them have the 9th or 10th grade, less than the year that students attend raising difficulties to support their sons. Students from secondary schools have a low perception of the teacher´s work because they have fewer activities and they don´t like the way most teachers teach. In the interviews students from secondary level highlight the extent of the programs as the major factor that negatively influences the process of teaching and learning. In the third dimension – Students` Participation we would like to focus attention on three items: Absenteeism, I participate in sports events in my school and I participate in other school events. The result of the first item absenteeism shows that it is not very high, however this is higher in students from professional courses when compared with students in regular courses. The second and the third items reveal low students' participation in school activities like sports events nonetheless we detect differences between students from secondary and middle level. From the interviews we can say that it is due to the pressure of results as students focus in the study and extra support to improve outcomes. In the dimension Academic Self-Concept we highlight the item I will graduate from high school. This result has to do with our sample, since that majority of students want to go to university. In the last dimension, Students` Engagement we would like to focus on three items: I get along with most of other students, School spirit is very high in my school and My teachers spend time just talking with me. These results show that students consider there is a weak relationship student-teacher, with the teacher providing little time for a more individualized student monitoring.

3.2. Teachers 'questionnaire

In table 6 we present the results of the Teachers` questionnaire. We highlight the dimension mean and the values of some items, lower and higher for dimension.

Table 6. Results of Teachers' questionnaire_Average per dimension / Item

Principal transformational leadership **Mean – 3,65**	**Distributed leadership** **Mean – 3,49**	**Organisational learning** **Mean – 3,29**
Vision and Goals – **3,58**	Teacher committees and/or teams – **3,50**	Trusting and collaborative climate – **3,58**
Culture – **4,12**	The whole staff working together – **3,48**	Shared and monitored mission – **3,41**
Structure – **3,75**		Taking initiatives / risks – **3,19**
Intellectual Stimulation – **3,24**		Ongoing, relevant professional development - **3,09**
Individual Support – **3,70**		
Performance Expectations – **3,60**		

In what concerns the first dimension – Principal transformational leadership we would like to highlight the questionnaire items: Intellectual stimulation and Culture. The result of intellectual stimulation reveals that there is a clearance at working level between the principal and the teachers, normally this role is played by the head of department. The high mean item culture shows that the principal tries to promote an atmosphere of trust among the

staff and respects for students and staff. In the dimension Distributed leadership we like to highlight two items, Teacher committees or teams and The whole staff working together lead us to conclude that principals´ distribute leadership by working teams and that there is collaboration among teachers. The interviews show the principal´s need to create conditions that easy the implementation of a collaborative culture through the definition of working teams. Despite teachers and heads of departments confirm that principals try to implement a collaborative culture, it is also pointed out that the existing collaborative work is mostly carried out with the help of digital platforms, and it consists mainly in sharing documents such as tests and matrices. According to the heads of department, this is due to the lack of common time to do effective collaborative work. In the dimension Organisational learning we would like to focus on the item Relevant professional development on questions like Adequate time is provided for professional development and The school makes use of external advisers. Given the results shown in the first question we believe that they are charged to the limitations of the law that requires the principal to dismiss time for teacher's training. The second question`s results may vary according to the schools budgets which may or may not allow hiring an external advisor.

4. Conclusion

The results of our study indicate that the principals seem to have a transformational leadership. This type of leadership based on the creation of an atmosphere of trust, implying teachers in decisions concerning the programs and instruction (shared leadership). According to the model that frameworks our study these two factors are enhancers of the development of a professional community, this being related to the improvement of teaching and the students outcomes (Leithwood, 2010; Bolivar, 2012). Although our study reveals that school groupings face some constraints due to the lack of common time to develop collaborative work, it is stated that teachers work in teams and collaborate in planifications and in test construction. In our sample the data also show that the improvement of schools happens mainly because there is a climate of collaboration and trust. Principals attempt to improve classroom conditions through a proper constitution of classes mainly in secondary education when the principal need in some disciplines join students from different courses. There is a concern with school discipline expressed by principals, teachers and students especially in basic schools, which is appointed as being the main factor that influences teaching and learning.

Family support decreases as students progress from one level of education to another and this is one of the factors that directly influences students` outcomes. The engagement of students in school is lower in the secondary level. Students consider that teachers do not spend time with them individually, attributing it to the pressure teachers feel to teach all the contents in the school programs mainly in the subjects that are subjected to examinations. Schools where the national examinations have a positive evolution over the four last years show better outcomes in terms of family background and students`engagement.

Therefore according to the above explained we can consider that there seems to be a link between the principal´s leadership and students' outcomes in Portuguese schools. Principals develop a set of actions to improve school and classroom conditions and influence teachers` work, which in turn influence students` outcomes.

The results corroborate the study of Leithwood et al. (2010) and represent a first step in identifying the school factors that influence students' outcomes in Portuguese schools.

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